

WHAT IS CLAIMED IS:

1. A method of sterilizing objects utilizing a supercritical fluid, comprising the steps of:

(1) connecting a pressure cleaning vessel and a vacuum chamber to each other by way of at least one connecting pipe in said equipment utilizing said supercritical fluid;

(2) impregnating the objects to be sterilized, for a given period, in said supercritical fluid with which said pressure cleaning vessel has been filled; and

(3) thereafter opening the connection between said pressure cleaning vessel and said vacuum chamber so as to generate sudden bubbling within said vessel as a result of a pressure difference;

wherein thorough sterilization is achieved when said supercritical fluid having penetrated into bacteria and viruses explodes and destroys these organisms instantly by its power of vaporization and expansion; and

wherein finish cleaning work is also achieved at the same time by the cleaning action of said supercritical fluid without any need of drying said fluid.

2. A method of sterilizing objects utilizing a supercritical fluid, comprising the steps of:

(1) providing an opening in the ceiling of a pressure cleaning vessel in said equipment;

(2) impregnating the objects to be sterilized, for a given period, in said supercritical fluid with which said pressure cleaning vessel has been filled;

(3) thereafter releasing the fluid fully through said opening in the ceiling of said pressure cleaning vessel, so as to generate sudden bubbling within said vessel as a result of a large pressure difference;

wherein thorough sterilization is achieved when said supercritical fluid having penetrated into bacteria and viruses explodes and destroys these organisms instantly by its power of vaporization and expansion; and

wherein finish cleaning work is also achieved at the same time by the cleaning action of said supercritical fluid without any need of drying.

3. The method according to claim 1, wherein said objects are documents, letters or stationary.

4. The method according to claim 2, wherein said objects are documents, letters or stationary.

5. The method according to claim 1, wherein said objects are contaminated by SARS virus or touched by a person contaminated by SARS virus.

6. The method according to claim 2, wherein said objects are contaminated by SARS virus or touched by a person contaminated by SARS virus.

7. The method according to claim 1, wherein said objects are contaminated by spore-forming bacteria.

8. The method according to claim 2, wherein said objects are contaminated by spore-forming bacteria.

9. The method according to claim 5, wherein said spore-forming bacteria are exosporium-covered *Bacillus subtilis* or *Bacillus anthracis*.

10. The method according to claim 6, wherein said spore-forming bacteria are exosporium-covered *Bacillus subtilis* or *Bacillus anthracis*.

11. The method according to claim 1, wherein said thorough sterilization is achieved at a temperature more than about 80°C.

12. The method according to claim 2, wherein said thorough sterilization is achieved at a temperature more than about 80°C.

13. The method according to claim 1, wherein cleaning action is performed by the forced agitation of liquefied gas after the vaporization and expansion of said supercritical fluid.

14. The method according to claim 2, wherein cleaning action is performed by the forced agitation of liquefied gas after the vaporization and expansion of said supercritical fluid.

15. The method according to claim 1, wherein said cleaning action is performed by the bubbling generated when the fluid, which is supercritical to a relatively higher extent than the fluid inside the pressure cleaning vessel, is introduced into said pressure vessel through its bottom.

16. The method according to claim 2, wherein said cleaning action is performed by the bubbling generated when the fluid, which is supercritical to a relatively higher extent than the fluid inside the pressure cleaning vessel, is introduced into said pressure vessel through its bottom.

17. The method according to claim 1, wherein said objects are medical appliances, dental materials and metal objects inserted into a body of a patient.

18. The method according to claim 2, wherein said objects are medical appliances, dental materials and metal objects inserted into a body of a patient.